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09/751,604	12/29/2000	Thomas J. Foth	F-220	8551

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EXAMINER

COFFY, EMMANUEL

ART UNIT PAPER NUMBER

2157

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,604

Applicant(s)

FOTH, THOMAS J.

Examiner

Emmanuel Coffy

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7 May 02</u> | 6) <input type="checkbox"/> Other: _____ |

1. This action is responsive to the amendment filed on September 8, 2005. Claims 1, 9, 17 and 24-27 were amended. Claims 8 and 16 are cancelled. Claims 1-27 directed to a method, network device and network for "Method For Load Balancing Of Requests For Service By Devices On a Network And a Device And a Device And a Network for Carrying Out such Method " are pending.

Response to Arguments

2. Applicant's arguments regarding the duplicate claims are persuasive. Therefore, the objection is hereby withdrawn.
3. Applicant's main argument is directed to steps c2) of claims 1, 9 and 17 as amended. Applicant asserts that the cited prior art does not disclose or anticipate steps c2) of claims 1, 9 and 17 as amended namely: accessing said table to retrieve a service provider address associated with a service provider location code geographically closest to said retrieved location code so that utilization of the service providers is systematically load balanced with respect of the geographic location of the client. The arguments have been considered but are moot in view of the new ground(s) of rejection.
4. Applicant is advised that only the limitation, which was added to overcome the prior art, is considered namely claims 1, 9, and 17.
5. All objections not addressed in Applicant's response are herein reiterated.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 9 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (US 6,078,960) in view of Swildens et al. (U.S. 6,484,143) in further view of Zisapel et al. (US 6,665,702).

Ballard teaches the invention substantially as claimed including load balancing which is achieved at the client side, rather than at the server side of a client-server network. Each client computer regularly receives a load balance list, enumerating respective addresses of multiple server computers. Subsequent to the absence of a server, a client computer then receives an updated list. (See abstract)

Claim 1:

A method for balancing the load of requests from a plurality of network devices for service from a selected one of a plurality of service providers, said devices and said service providers being interconnected by a network, said method comprising the steps of:

a) in each of said devices, storing a location code indicative of geographic locations of said devices;

b) in each of said devices, storing a table relating geographic location codes and network addresses for said service providers', and

c) said devices being programmed so that a requesting device initiates a request by:

c1) retrieving said location code for said requesting device, (See col. 6, lines 34-39.)

c2) accessing said table to retrieve a service provider address associated with a service provider location code geographically closest to said retrieved location code; (See col. 6, lines 34-39 and lines 5-11.)

c3) addressing said initiated request with said retrieved service provider address; and (See col. 6, lines 34-39, lines 5-11 and lines 49-60.)

d) accessing by said devices a seed system to down load an updated table if said devices cannot access the service provider retrieved from said table. (See col. 6, lines 40-42, and line 65-col. 7, line 7)(a list is a table.)

Ballard does not specifically teach location code. However, Swildens discloses a server location in Fig 6D and col. 17, lines 42-54. Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard with the physical location code disclosed by Swildens. Such a system would provide for an efficient method for managing network's traffic.

Ballard and Swildens are silent as to "geographical location" and "so that utilization of the service providers is systematically load balanced with respect to the geographical location of the client." However, Zisapel discloses the use of "geographical location" as prior art. See col. 2, lines 8-19. Furthermore Zisapel teaches systematically load balancing utilization of the service providers. See col. 4, lines 33-38.

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the physical location code disclosed by Swildens with the load balancing disclosure of Zisapel. Such a system would provide for the best service by efficiently routing the network's traffic.

Claim 9:

A network device, said device receiving service from a selected one of a plurality of service providers when said device and said service providers are interconnected by a network, said device comprising:

a) a first data store storing a location code indicative of said device's geographic location,

b) a second data store storing a table relating geographic location codes and network addresses for said service providers', and

c) said device being programmed to initiate a request by:

c1) retrieving said location code for said device; (See col. 6, lines 34-39.)

c2) accessing said table to retrieve a service provider address associated with a service provider location code geographically closest to said retrieved location code; and (See col. 6, lines 34-39 and lines 5-11.)

c3) addressing said initiated request with said retrieved service provider addressed: and (See col. 6, lines 34-39, lines 5-11 and lines 49-60.)

d) accessing by said devices a seed system to down load an updated table if said devices cannot access the service provider retrieved from said table. (See col. 6, lines

40-42, and line 65-col. 7, line 7)(a list is a table.)

Ballard does not specifically teach location code. However, Swildens discloses a server location in Fig 6D and col. 17, lines 42-54. Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard with the physical location code disclosed by Swildens. Such a system would provide for an efficient method for managing network's traffic.

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Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the physical location code disclosed by Swildens with the load balancing disclosure of Zisapel. Such a system would provide for the best service by efficiently routing the network's traffic.

Claim 17:

A network comprising a plurality of network devices and a plurality of service providers, said devices receiving service from selected ones of said service providers when said devices and said service providers are interconnected by said network, said devices each comprising:

a) a first data store storing a location code indicative of said device's geographic location,

b) a second data store storing a table relating geographic location codes and network addresses for said service providers', and

c) said device being programmed to initiate a request by:

c1) retrieving said location code for said device; (See col. 6, lines 34-39.)

c2) accessing said table to retrieve a service provider address associated with a service provider location code geographically closest to said retrieved location code; and (See col. 6, lines 34-39 and lines 5-11.)

c3) addressing said initiated request with said retrieved service provider addressed: and (See col. 6, lines 34-39, lines 5-11 and lines 49-60.)

d) accessing by said devices a seed system to down load an updated table if said devices cannot access the service provider retrieved from said table. (See col. 6, lines 40-42, and line 65-col. 7, line 7)(a list is a table.)

Ballard does not specifically teach location code. However, Swildens discloses a server location in Fig 6D and col. 17, lines 42-54. Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard with the physical location code disclosed by Swildens. Such a system would provide for an efficient method for managing network's traffic.

Ballard and Swildens are silent as to "geographical location" and "so that utilization of the service providers is systematically load balanced with respect to the geographical

location of the client.” However, Zisapel discloses the use of “geographical location” as prior art. See col. 2, lines 8-19. Furthermore Zisapel teaches systematically load balancing utilization of the service providers. See col. 4, lines 33-38.

Hence, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the physical location code disclosed by Swildens with the load balancing disclosure of Zisapel. Such a system would provide for the best service by efficiently routing the network’s traffic.

8. Claims 6-7, 13-15, and 21-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (US 6,078,960) in view of Swildens et al. (U.S. 6,484,143).

Claims 6:

The method of claim 5 further comprising the step of: said selected devices accessing said table to retrieve another service provider address associated with a service provider location code next closest to said retrieved location code if they cannot log on to said primary or said alternate service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table (primary or alternate). See col. 6, lines 10-29. See also Rune ('913) col. 1, lines 57-63.

Claim 7:

The method of claim 1 accessing said table to retrieve another further comprising the step of: said devices accessing said table to retrieve another service provider address associated with a service provider location code next closest to said retrieved

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location code if they cannot log on to said service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table. See col. 6, lines 10-29.

Claim 13 :

The device of claim 9 wherein a group of said service providers share a common location code, said device addressing said initiated request to a primary service provider in said group, and said device being further programmed to address said initiated request to an alternate service provider in said group if said device cannot log on to said primary service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table (primary). See col. 6, lines 10-29. See also Rune ('913) col. 1, lines 57-63.

Claim 14:

The device of claim 13 wherein said device is further programmed to access said table to retrieve another service provider address associated with another service provider location code next closest to said retrieved location code if said device cannot log on to said primary or said alternate service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table (primary or alternate). See col. 6, lines 10-29. See also Rune ('913) col. 1, lines 57-63.

Claim 15:

The device of claim 9 wherein said device is further programmed to access said table to retrieve another service provider address associated with another service provider location code next closest to said retrieved location code if said device cannot log on to said service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table. See col. 6, lines 10-29.

Claim 21

The network of claim 17 wherein a group of said service providers share a common location code, selected ones of those of said devices which are closest to said group addressing said initiated request to a primary service provider in said group, said selected devices being further programmed to address said initiated request to an alternate service provider in said group if they cannot log on to said primary service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table (primary). See col. 6, lines 10-29. See also Rune ('913) col. 1, lines 57-63.

Claim 22:

The network of claim 21 wherein said selected devices are further programmed to access said table to retrieve another service provider address associated with another service provider location code next closest to said retrieved location code if

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they cannot log on to said primary or said alternate service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table (primary or alternate). See col. 6, lines 10-29. See also Rune ('913) col. 1, lines 57-63.

Claim 23:

The network of claim 17 wherein said devices are further programmed to access said table to retrieve another service provider address associated with another service provider location code next closest to said retrieved location code if they cannot log on to said service provider.

Ballard teaches an emergency back-up load balance list (table) whereas a client computer is unable to access any of the servers in the normal load balance table. See col. 6, lines 10-29.

Claim 24

The network of claim wherein said devices are further programmed to access a seed system to download an updated table if said table becomes invalid.

Ballard teaches the limitation of above claim at col. 6, lines 40-42, and line 65-col. 7, line 7)(a list is a table.)

9. Claims 2, 10 and 18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (US 6,078,960) in view of Swildens et al. (U.S. 6,484,143) in further view of Leon (US 6,424,954).

Claims 2, 10 and 18:

The method of claim 1, device of claim 10 and network of claim 17 wherein at

least one of said network devices is a mailing device.

On page 5 of the specification, applicant indicates that network devices include mailing devices such as postage meters and rating scales and on page 3 applicant asserts that a mailing device is any device which may know as a matter of its operation its geographic address. (emphasis added)

Neither Ballard nor Swildens make specific mention of such device. However, in Fig 1A, and col. 1, line 49-col. 2, line 27 Leon discloses such a device. Thus, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the physical location code disclosed by Swildens with the mailing device taught by Leon. Since a mailing device makes use of zip codes as unique identification, it would readily incorporate zip codes as a convenient geographic ISP locator.

10. Claims 3, 11 and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (US 6,078,960) in view of Swildens et al. (U.S. 6,484,143) in further view of Rabinovich (US 6,256,675).

The method of claim 3, device of claim 11 and network of claim 19 wherein at least an approximate distance between two geographic locations can be calculated as a function of location codes corresponding to said two locations.

Swildens discloses location code in Fig 6D and col. 17, lines 42-54. Neither Ballard nor Swildens teach approximate distance between two geographic locations. However, Rabinovich at column 7, lines 29-53, column 10, lines 7-12 and column 3, lines 1-5, 49-

51 extensively discloses the use of geographical relationship to load balancing.

Thus, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the physical location code disclosed by Swildens with the approximate distance between two geographic locations taught by Rabinovich. This system would provide for a way to determine the distance between a user and ISP server so that the shortest distance could be utilized hence response time would be improved.

11. Claims 4, 12 and 20 are rejected in view of applicant's disclosed prior art (U.S. 4,122,526).

As for claims 4, 12 and 20, the use of zip code as location code is obvious as evidenced by applicant's disclosure of its own prior art filed on Dec 20, 1976 and awarded on October 24, 1978. One of ordinary skill in the art confronted with the problem of geographically locating the closest server would make use of the "zip-code-to-postal zone" teachings of applicant's prior art identified as Dlugos et al. (U.S. 4,122,526).

By utilizing the closest available server, system response time is ameliorated and thus performance is improved. Hence, the user would experience smooth network access. Furthermore, Leon ('954) discloses zip code at Fig. 8B.

11. Claims 5, 13 and 21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ballard (US 6,078,960) in view of Swildens et al. (U.S. 6,484,143) in further view of Rune (US 6,304,913).

Claims 5, 13 and 21:

The method of claim 1, device of claim 10 and network of claim 17 wherein a group of said service providers share a common location code and selected ones of those of said devices which are closest to said group address initiated a request to a primary service provider in said group; said method further comprising the step of: said selected devices addressing said initiated request to an alternate service provider in said group if they cannot log on to said primary service provider.

Neither Ballard nor Swildens teach a group of said service providers share a common location code and selected ones of those of said devices which are closest to said group address initiated a request to a primary service provider in said group. However, Rune expressly discloses a group of DNS servers linked in a hierarchical relationship (functionally equivalent to sharing a common location code) and this alternate service provider concept (a DNS is a Service Provider). See col. 5, lines 19-37.

Thus, it would have been obvious at the time of the invention for an artisan of ordinary skill in the art to combine the use of client-side load balancing as taught by Ballard and the traffic management disclosed by Swildens with the group of said service providers share a common location code and selected ones of those of said devices which are closest to said group address initiated a request to a primary service provider

in said group taught by Rune. This system would provide for double redundancy thereby insuring QoS with guaranteed access to the network.

CONCLUSION

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

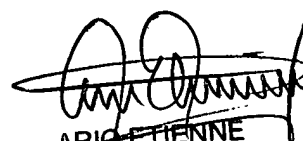
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Coffy whose telephone number is (571) 272-3997. The examiner can normally be reached on 8:30 - 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-3997. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Coffy,
Patent Examiner
Art Unit 2157



ARIO ETIENNE
PRIMARY EXAMINER